CLIMATE PROTECTION MEASURES
Implementation Progress Report
September 2010

SUMMARY

On July 10, 2008 the City Council adopted implementation plans for seven additional climate protection measures to reduce Chula Vista's greenhouse gas or "carbon" emissions. The new measures, which built off the City's original Carbon Dioxide Reduction Plan, were designed to assist the City in meeting its emissions reduction commitment of 20% below 1990 levels by requiring "clean" vehicle replacements for City and contracted fleet services, linking energy evaluations to annual business licenses, mandating green building standards for all new construction, facilitating turf lawn conversions to water-saving landscapes, focusing mixed-use, transit–oriented development near trolley stations, and implementing a community energy efficiency and solar retrofit program.

As directed by City Council, staff has been implementing the approved measures over the last 2 years based on available funding. The following progress report outlines each measure's implementation status and upcoming milestones during this time period. Most measures are meeting the milestones outlined in their original implementation plans and the City has been very successful in securing financing to support the measures' short-term implementation. However, funding availability beyond 2012 has not been finalized although staff continues to identify and pursue potential external opportunities. The City has also completed an initial climate adaptation planning process to complement the seven measures' implementation and broaden the effectiveness of Chula Vista's climate protection program.

OVERALL PROGRAM ADMINISTRATION

Awards & Recognition

In March, the City of Chula Vista received an "Outstanding Organizational Achievement Award" from the California Center for Sustainable Energy at their San Diego Excellence in Energy (SANDEE) Banquet. The City was recognized for its comprehensive efforts in promoting energy efficiency and renewable energy, and improving the community's environmental and economic sustainability. Specific accomplishments included creating the first citywide Green Building Standard in San Diego County, providing free energy evaluations and minor retrofits for residents and businesses, and investing in the improvement of lighting, air conditioning, and hot water systems at numerous libraries and recreation centers. The City's Green Building Standards (and related efficiency codes) also were recognized in 2010 by the San Diego Chapter of the American Planning Association with their "Innovation in Green Community Planning Merit Award." All of these efforts help create utility cost savings and more comfortable public and private facilities.

Stakeholder Outreach

Since December 2009, the City of Chula Vista has reconvened and expanded its Climate Change Working Group (CCWG) to assess the community's vulnerabilities to climate change impacts and develop strategies which "adapt" the community to the projected changes. The CCWG - comprised of diverse stakeholder and community representatives – hosted 12 public meetings as well an "open house" public forum to solicit public input while developing their recommendations on *Climate Adaptation Strategies.* The CCWG's final recommendations are designed to reduce future risk and costs from projected climate impacts within energy and water supply, public health, wildfires, ecosystem management, coastal infrastructure, and the local economy sectors. The adaptation strategies complement the City's current climate mitigation measures and many strategies will also contribute to lowering citywide greenhouse gas emission levels. If directed by City Council, staff will develop more detailed plans for the strategies to better define their implementation costs, critical steps, and timelines for future City Council review and consideration. The City of Chula Vista is the first local government in the region to begin assessing its resiliency to projected climate change impacts.

Emissions Tracking & Reporting

The City completed its 2009 greenhouse gas (GHG) emissions inventory to identify current emission sources and to guide policy decisions. The *2009 GHG Emissions* indicated that annual citywide GHG levels had increased by 28% compared to 1990, but have decreased by 2% since the 2008 inventory. Per capita and per housing unit levels in Chula Vista were approximately 27% and 19% below 1990 levels, respectively. GHG emissions from municipal sources (i.e. operations, facilities, and vehicle fleet) in 2009 were approximately 7% below 2008 levels and 47% below 1990 levels. San Diego Gas & Electric's (SDG&E) percentage of grid-supplied renewable energy continues to increase contributing to lower energy-related emissions compared to 2008. Unlike previous inventories, there was also a reduction in citywide energy consumption due most likely to the global economic downturn. However, as the economy rebounds over the next few years, some of these energy use reductions may be reversed.

Chula Vista also recently transitioned its emissions verification and reporting to The Climate Registry, which was based on the California Climate Action Registry, but expanded to include participants from across North America. Participation in The Climate Registry complements the City's other climate protection efforts by documenting GHG emissions as it relates to Assembly Bill 32's (California Global Warming Solutions Act of 2006) statewide reduction targets and prepares the City for potential carbon trading opportunities in the future. The City of Chula Vista is the first local government in San Diego County to successfully report its GHG emissions through The Climate Registry and participate in SDG&E's Cool Planet Program which reimburses the City's costs for preparing and verifying its GHG emissions inventory. The City is eligible to participate in the Cool Planet Program because of its aggressive energy efficiency retrofit efforts on its municipal facilities.

MEASURE #1 – CLEAN VEHICLE REPLACEMENT POLICY FOR CITY FLEET

Overview

Measure #1 directs the City to require that 100% of the replacement vehicles purchased for the municipal fleet be high efficiency (hybrid) or alternative fuel vehicles (AFVs). However, factors such as the appropriateness for the vehicle task, fueling infrastructure, petroleum displacement, and the overall cost and environmental benefit must be considered prior to purchasing each replacement vehicle.

Status

The conversion of the City's 128 diesel-fueled vehicles (or 23% of the total fleet) to biodiesel will be completed by the end of October 2010. The new biodiesel fuel, which will mainly be derived from recycled cooking oil, will reduce associated GHG emissions by 20% compared to conventional diesel fuel. In addition, the Police Department has begun replacing existing vehicles with newer models which are over 20% more fuel efficient. Police administrators also instituted an active "anti-idling" campaign to lower department fuel use and have placed reminder stickers in all vehicles.

Next Steps

City Council approved a design/build agreement on February 23, 2010, with Western Pump Inc. for the design and construction of a 12,000-gallon biodiesel tank at the Public Works Corp Yard. This project is anticipated to be completed in October of 2010. The new tank was fully funded through the City's federal Energy Efficiency & Conservation Block Grants (EECBG). To complement the upcoming release of commercially-available electric vehicles from several automobile manufacturers, City staff will continue working with regional partners to expand the availability of electric vehicle charging stations throughout Chula Vista at both public facilities and within private homes and businesses.

MEASURE #2 – CLEAN VEHICLE REPLACEMENT FOR CITY-CONTRACTED FLEETS

Overview

Measure #2 directs staff to work with fleets under City authority to influence their expanded use of alternative fuels and high efficiency/alternative fuel vehicles (AFV) including electric, biodiesel, ethanol, hybrid, hydrogen, and compressed natural gas (CNG) based on appropriateness for vehicle task, fueling infrastructure, petroleum displacement, overall cost, and environmental benefit.

Status

Chula Vista Transit

The transit fleet is now comprised of 100% alternative fuel vehicles.

Street Sweeping

The current contract with Cannon-Pacific expires June 30, 2011. Language will be added to the Request for Proposals outlining the City's new policy for AFV/Hybrid vehicles.

Trash Hauler

Allied Waste Services (AWS) re-instituted the use of biodiesel for over 50 diesel-fueled vehicles in its Chula Vista fleet. AWS will also be converting approximately 20 (or 33%)

of its diesel-fueled vehicles to CNG by December of 2010. The trucks have been ordered and are expected to start arriving in November of 2010.

Tow Trucks
The contract with the tow companies to provide police-initiated tows expires June 30, 2011. Language will be added to the Request for Proposals outlining the City's new policy for AFV/Hybrid vehicles.

Next Steps
The City plans to work with utilities and regional agencies to further develop local infrastructure for alternative fuels helping to ensure that these fueling options are readily available for contractors and the public, whenever possible.

MEASURE #3 – BUSINESS ENERGY EVALUATIONS

Overview
The measure, as originally adopted by City Council, would encourage commercial and industrial businesses to participate in an energy and water evaluation of their premises through a new municipal ordinance. The measure helps businesses identify energy efficiency and water conservation opportunities at their facilities and take advantage of rebate, incentive, and financing programs for improvements solely at the business's discretion. The evaluations, which are offered at no cost, apply to licensed businesses with a physical storefront and/or office location.

Status
In September 2009, City Council directed staff to create a new municipal ordinance that would require businesses to participate in the Free Resource & Energy Business Evaluation (FREBE) program. The ordinance, which was subsequently passed by City Council in November, states that businesses with store-fronts or offices need to participate in the program when a new business license is issued or once every 3-5 years for a renewed business license. These businesses are <u>not</u> required to implement any of the identified energy or water efficiency opportunities and are <u>not</u> required to complete evaluations for facility areas beyond their operational control (ex. whole-building systems operated and maintained by a Property Manager/Landlord).

In December 2009, approximately 990 existing businesses received notices stating that they would be required to participate in the FREBE program during calendar year 2010. Businesses were able to schedule an evaluation by selecting a preferred date and time on their business license form, through an on-line appointment calendar, or by calling the City's bilingual staff in the Department of Conservation & Environmental Services. Between March and May, staff made two attempts via telephone to contact businesses who had not scheduled an appointment in order to assist with selecting an evaluation date and time. At the end of May, unresponsive businesses were sent postcards with a pre-scheduled appointment during their regular operating hours which could be rescheduled if necessary.

As of September 15th, 975 or 99% of the businesses have scheduled or completed a no-cost energy and water evaluation through the FREBE program. Businesses which were no

longer operating or exempt from the evaluation are included in this total. To date, only 13 or 1% of businesses remain unresponsive to the City's multiple attempts to perform an evaluation. These businesses received a "Non Compliance" letter in September and have until November 15th to schedule an appointment or be subject to a fine on their 2011 business license application fees (equivalent to $15 or 5% of business license costs, whichever is greater). Staff continues to actively reach out to these unresponsive businesses to encourage their participation and highlight the potential benefits of the FREBE program on their monthly utility costs.

A recent survey of past participants highlighted that 95% of evaluated businesses implemented a "no-cost" recommendation (such as adjusting thermostat settings, signing up for SDG&E's Energy Waves tool, or educating their employees about energy efficiency) and 62% implemented a "low cost" recommendation (such as installing occupancy sensors, retrofitting to more efficient lighting, or servicing their HVAC system). In addition, approximately 95% of respondents characterized the free evaluations as a positive experience and would recommend the program to other businesses. City staff was also able to distribute 241 CFLs and 81 Smart Power Strips to participating businesses providing immediate energy cost saving opportunities. It should be noted that the level of business satisfaction with the FREBE program and their willingness to implement recommendations from the evaluations has not significantly changed since the program transitioned from a voluntary to a mandatory component of the business license process. Finally, the program was recently recognized in a "Best Practices Series" for local governments sponsored by the California Public Utility Commission and Investor-Owned Utilities.

Next Steps

Staff will continue to monitor and report to City Council the program's participation levels over the next business license cycle. In addition, the FREBE program will continue to link to new SDG&E and other utility rebate and incentive programs including direct install services which provide free energy-saving maintenance and efficiency improvements to help lower business's monthly utility costs.

MEASURE #4 – GREEN BUILDING STANDARD

Overview

Measure #4 has mandated new and renovated residential and non-residential projects to incorporate the requirements of the Housing and Community Development's version of the California Green Building Standards Code and to be more energy efficient than the 2008 Building Energy Efficiency Standards by a specific percentage. In addition, staff is working toward a community/site design carbon savings option by which builders can use carbon savings realized from implementing sustainable community or site design measures toward meeting a portion of the required increased building energy efficiency standards. The other two components of Measure #4 are (1) implementing a green building awareness program and (2) updating existing and establishing new design and regulatory provisions that incorporate sustainable practices.

Status

<u>Green Building Standards</u>

City Council adopted the Green Building Standards on October 6, 2009 and the standards have been in effect since November 5, 2009. Since their inception, 1,090 residential units and commercial buildings have complied with these standards. Buildings, remodels, and additions constructed under these new standards have decreased indoor water consumption by 20%, offer a more healthier and comfortable environment, and have much lower life-cycle costs to operate.

Increased Energy Efficiency Standards

City Council adopted the Increased Energy Efficiency Standards on January 26, 2010 and the standards have been in effect since February 26, 2010. Since their inception, 396 residential units and commercial buildings have complied with these standards saving an estimated 100,000 pounds of GHG emissions per year. Buildings, remodels, and additions constructed under these new standards have increased energy efficiency by 35% to 40%. Included in this calculation are the savings from the implementation of the statewide 2008 Building Energy Efficiency Standards (versus the previous 2005 version).

Status regarding the carbon credit option component is discussed under the Policy Guidelines and Regulatory Amendments section.

Green Awareness Program

The successful launch and implementation of the Green Building Standards, the Increased Energy Efficiency Standards, and the Solar Pre-Plumbing/Pre-Wiring ordinances (see Measure #5) is due to a comprehensive staff training program and an extensive public outreach campaign organized by the City's "Sustainability Center" and its coordinator. A formal staff training program began in 2009 and the City recently launched a training series, in coordination with the Sheet Metal Joint Apprenticeship Training Committee, the National Electrical Contractors Association, and the San Diego Electrical Training Center, for City staff, the development community, and other jurisdictions. The public and development communities are also counseled on the requirements of the standards and aided with compliance issues throughout the permitting and construction process. For example, staff organizes pre-submittal application meetings, facilitates permitting, reviews plans, and documentation, and assists with inspections. All segments of the process are monitored through an audit program to assist staff with effective implementation.

Chula Vista's successful implementation of the new standards sets an example for other cities considering green building codes. In addition, research groups sponsored by the California Energy Commission, the Building Standards Commission, and the Department of Housing and Community Development have frequently solicited information on Chula Vista's progress with energy efficiency and green building for use in the development of their training and implementation programs. Trade and professional organizations also endorse Chula Vista's level of enforcement as it drives the need for skilled workers and the use of proper equipment and materials in order to comply with municipal codes.

Policy Guidelines and Regulatory Amendments

This component consists of three tasks related to updating existing and establishing new design and regulatory provisions to ensure incorporation of sustainable practices into new development projects: (1) Air Quality Improvement Plan (AQIP) Guidelines, (2) Zoning

and Design Guidelines, and (3) current and proposed efforts of the Chula Vista Research Project (CVRP) through the National Energy Center for Sustainable Communities (NECSC) and San Diego State University (SDSU) regarding a Community Site Design Program:

Air Quality Improvement Plan Guidelines
The City Council adopted updated AQIP Guidelines on December 8, 2009, and those are now being used in preparation of SPA Plans for Villages 3, 4, 8, 9 and 10 as part of the South Otay Ranch/University Villages planning efforts. Under the guidelines, the projects will also be evaluated using an updated version of the INDEX computer model that incorporates new baseline score requirements that must be met or exceeded.

When the above discussed Increased Energy Efficiency Standards were adopted, a placeholder for a community/site design carbon savings option was included, under which builders can use carbon savings realized from implementing sustainable community or site design measures toward meeting a portion of the required increased building energy efficiency standards. Because the credit option approach is cutting edge and pioneering, staff acknowledged that industry standards on calculating and quantifying specific credits were not yet defined, and would be developed pending the outcome of ongoing studies. Staff estimates that those efforts will take another year or more depending upon the outcome of grants being sought in conjunction with the NECSC as discussed further in the applicable section below.

Zoning and Design Guidelines
On May 25, 2010, the City Council received and accepted a report regarding potential updates to the City's Design Manual that would promote sustainable practices and energy efficiency in smaller-scale site plans and projects. Based on the Council's input, staff is now preparing related Design Manual updates and will be incorporating those along with proposed updates for Mixed Use areas. An initial workshop was held with the Chula Vista Redevelopment Corporation Board (CVRC) and the Design Review Board (DRB) on June 24, 2010. A follow-up workshop with the DRB was also held July 19, 2010. Staff presently anticipates bringing the updated Design Manual and Mixed Use provisions forward for formal consideration by the DRB, CVRC, Planning Commission, and City Council in November-December 2010.

CVRP/NECSC Community Site Design Program-
On February 9, 2010, results from the initial Chula Vista Research Project (CVRP) conducted by the National Energy Center for Sustainable Communities (NECSC) were presented to local government, real estate and development industry practitioners, and the City Council.

Although the CVRP was not specifically designed to generate low-carbon site development standards and guidelines, the research results do provide a firm foundation upon which to frame follow-up research to produce them. As mentioned above, the "carbon credit" option approach included in the City's new Increased Energy Efficiency Standards and updated AQIP Guidelines needs additional research information on measuring and quantifying low-carbon site design standards. As noted in previous progress reports, staff's work with the NECSC and other partners in seeking 2 rounds of

grant funding (through the California Energy Commission) has not resulted in a grant award.

Most recently, staff worked with the NECSC, City of San Diego, SANDAG, and other agencies as part of a regional consortium to prepare a grant application under the federal HUD/DOT Sustainable Communities Regional Planning Grant (SCRPG) program. The grant application was formally submitted on August 23, 2010. Chula Vista's component would fund the community planning and site design carbon credit modeling work. Due to the large number of applications, HUD/DOT has not given a specific date for award responses. The earliest anticipated response timeframe would be the end of the year, with a contract process to follow. If awarded, work could possibly begin by spring/early summer 2011 and would take approximately 12 to 18 months to complete. As a result, the timeframe for devising carbon calculations and credits for site design options would extend until approximately summer 2012.

Next Steps

As per Resolution 2009-248 adopted by City Council on October 20, 2009, staff will prepare and present for City Council consideration proposed local amendments to future versions of the California Energy Code requiring increased local energy efficiency standards as well as the necessary future cost-effectiveness studies. The 2011 California Energy Code is scheduled to go into effect sometime in 2011. Research is also starting on the 2010 California Green Building Code (CalGreen) that will go into effect statewide on January 1st, 2011. Implementation plans will address the significant changes to this code over the prior version adopted singularly by the City of Chula Vista in 2009. A voluntary program to encourage compliance with the additionally stringent "tiered" measures in CalGreen will also be explored. Future impacts of new State and Federal legislation and revised standards/codes (such as the International Green Construction Code, the International Energy Conservation Code, Green Globes, LEED, and Build it Green) will be tracked and evaluated. The increasing complexities and scope of these codes will require additional staff training, public outreach, and process adaptations.

With regard to the Policy and Regulatory Amendments component, staff will return with amendments to the City's Design Manual and Mixed Use provisions for consideration in November-December 2010. Staff will inform the City Council of the HUD/DOT decision regarding any SCRPG program awards and will continue to seek other funding opportunities.

MEASURE #5 – SOLAR & ENERGY EFFICIENCY CONVERSION PROGRAM

Overview

The "Solar & Energy Efficiency Conversion" program was recommended to help facilitate energy efficiency and renewable energy retrofits in the community and at municipal facilities. The community component, which is now called the *Home Upgrade, Carbon Downgrade* program, is intended to facilitate installation of energy-saving upgrades by helping the average resident and small business overcome common institutional barriers, upfront capital costs, complicated application processes, and time constraints. The program also strives to promote local job creation and economic development by linking community

participants with local contractors and vendors, while ensuring high levels of customer service and quality workmanship. Finally, Measure #5 included the implementation of a pre-wiring and pre-plumbing requirement for solar photovoltaic and solar hot water systems, respectively, in all new residential units to help reduce property owner's future installation costs.

Status

The Conservation and Environmental Services Department launched the *Home Upgrade, Carbon Downgrade's* Appliance Rebate Exchange component in April 2010 in partnership with local appliance retailers and the Chula Vista Chamber of Commerce. The component offers point-of-sale rebates for community members who purchase energy and water-saving appliances to replace existing, inefficient models. To date, over $35,000 of rebates (funded through federal Energy Efficiency & Conservation Block Grants) have been distributed in the community and leveraged with over $100,000 of California and utility-sponsored rebates further helping residents and businesses afford the new equipment.

The *Home Upgrade, Carbon Downgrade* program recently expanded to include low interest financing for property-owners interested in energy efficiency and renewable energy improvements. The revolving loan fund is structured so that participants' loan terms will be based on the monthly cost savings generated by their energy-saving improvements. Contractors hired by participating property-owners to perform the improvements will have to meet high consumer protection, training, and workmanship standards. As originally envisioned, the revolving loan fund was supposed to serve as the basis for creating a broader community financing mechanism to fund building retrofit projects through voluntarily, property assessments (known as "Property Assessed Clean Energy" or PACE financing). Since the last progress report, there has been opposition from federal housing regulators on implementing local PACE programs. As such, staff is investigating other municipal bond opportunities to provide the capitalization for a broader community efficiency retrofit program.

In regards to municipal retrofits, staff has initiated a new phase of energy efficiency and renewable energy improvement projects at City-owned buildings and facilities. The City will begin installation of almost 500 kW of solar photovoltaic energy systems on 11 sites. Once complete, the project will increase total onsite renewable energy generation capacity to approximately 10% of municipal demand and will help the City reach its ultimate goal of 20%. The City has also completed the design phase of its streetlight retrofit project (phase 1) which will convert about 4,600 lamps to more efficient technologies and decrease energy consumption by approximately 40%. Additional municipal retrofit projects which have begun initial implementation include lighting improvements at multiple parks and buildings, a new boiler system at Parkway Pool, and HVAC upgrades at the Public Works Corp Yard. In all cases, these municipal energy efficiency and renewable energy retrofit projects' financing costs will be repaid through the resulting energy cost savings and produce long-term General Fund savings once loans are repaid (less than 10 years).

Finally, since the "solar ready" ordinances went into effect on February 19, 2009, 494 residential units have been pre-plumbed and pre-wired to accommodate the installation of future solar photovoltaic and solar hot water systems. In addition, there have been 41 new

solar photovoltaic and 5 new solar hot water installations which have been permitted since February 2009.

Next Steps
Staff anticipates that the first round of low interest loans for community retrofit efficiency projects will be finalized over the next few months. Staff will also launch the final component of the *Home Upgrade, Carbon Downgrade* program in October 2010 which will feature matching incentives up to $3,500 for residents participating in SDG&E's new whole house retrofit program. Finally, staff will be finalizing financing options for future City Council consideration to fund the installation of up to 1.1 MW of additional solar photovoltaic systems and the retrofitting of an additional 4,400 streetlights with more efficient technologies

MEASURE #6 – SMART GROWTH AROUND TROLLEY STATIONS

Overview
Measure #6's implementation plan consists of four components whose status is presented in the following section. The combined intent of these efforts is to accomplish the remaining planning groundwork necessary to support realization of the "Smart Growth" development densities and intensities envisioned in both the General Plan and the Urban Core Specific Plan (UCSP) for the areas surrounding the E St., H St., and Palomar St. trolley stations.

Status
Urban Core Specific Plan Implementation/ E Street Station
In July 2010, staff received a final report from the local San Diego Chapter of the Urban Land Institute (ULI) presenting the findings of their Technical Advisory Panel (TAP) process for the E St. trolley station area. The TAP report was presented at a Chula Vista Redevelopment Corporation (CVRC) workshop on August 12, 2010. Based on the CVRC's input, staff is now working with CalTrans, MTS, SANDAG and others regarding station location and design options to form the foundation for overall site design. Staff is also beginning discussions with MTS on re-parceling City and MTS properties and negotiations with other property owners. Evaluation of more specific design/project options for all, or portions, of the site will follow accordingly. In addition, marketing of the site for actual development is envisioned to follow Coastal Commission actions on the Bayfront Master Plan.

H Street Corridor Study
This implementation plan component consists of three initiatives: (1) an Urban Land Institute program, (2) potential General Plan and/or UCSP amendments, and (3) completion of a 3-D visual simulation model with SANDAG of a redeveloped corridor. Per Council/CVRC direction in October 2008, funding for an Urban Land Institute (ULI) Advisory Services Program (or other effort) for the corridor remains on hold. Subsequent to completing work on the E St. Transit Focus Area, staff will return with a revised proposal for accomplishing the H Street Corridor Study subject to future funding availability.

Southwest Specific Plan(s)

Planning work is underway on preparation of a Specific Plan and Environmental Impact Report for the Palomar Gateway area around the Palomar St. trolley station. Responses to Request for Proposals for the Environmental Impact Report are due by September 23rd, while proposals for a market and a mobility study are due by September 26th. Consultant selection and contract finalization is expected to follow in October and November 2010. Staff is also near completion of an existing conditions analysis, and is working on other technical studies. Staff has been and will continue to coordinate these efforts, which should be completed by fall 2011, through regular meetings with the Southwest Working Group,

Other Related Regional Efforts

This component consists of two initiatives: (1) the I-5 Corridor Study with SANDAG and CalTrans and (2) funding to accomplish grade separation of the trolley line at E and H Streets. In regards to the I-5 Multi-Modal Corridor Study, three study alternatives and a preferred alternative were presented and accepted by SANDAG's Transportation Committee and the Board of Directors in June 2010. The preferred alternative is being reflected in SANDAG's draft 2050 RTP that is currently under review. Staff is now working with SANDAG and CalTrans in reviewing proposed operational and other improvements, and in evaluating proposed priorities for the improvements. The Draft Corridor Study is scheduled for completion by October 2010. Staff will subsequently present the study to City Council along with information regarding implications for the Western Chula Vista Transportation Development Impact Fee. In regards to trolley grade separation funding, staff will continue to work with SANDAG and others to identify and seek grant funding, including participation in ongoing regional grant programs. SANDAG's Draft Rail Grade Crossing Evaluation Summary (September 2010) contains needs rankings for grade separation projects based on previously approved evaluation criteria, and list Palomar St., E St., and H St. in Chula Vista as priorities 3, 5, and 6, respectively (out of 29).

Next Steps

Over the next 6 month period, the City will pursue E St. station relocation, and other property design and configuration issues with CalTrans, MTS, SANDAG, and other stakeholders. In addition, staff will complete the Palomar Gateway Specific Plan and Environmental Impact Report over the next 12 – 15 months. In coordination with SANDAG, the Development Services Department will complete the I-5 Corridor Study and present the outcomes to City Council in late 2010 early 2011. Finally, staff will continue to actively seek additional funding for the E Street, H Street, and Palomar Street trolley grade separation projects.

MEASURE #7 – TURF LAWN CONVERSION PROGRAM

Overview

Because water movement and treatment requires a large amount of energy and subsequently is a major contributor to greenhouse gas emissions, Measure #7 is intended to help residents and businesses replace turf lawn areas with "xeriscape" or "WaterSmart" landscaping. These landscape types are diverse, colorful, and attractive incorporating low maintenance and water-wise design features. Specifically, the program's components include (1) continuation and expansion of the NatureScape program to promote water conserving and

nature-friendly landscaping, (2) coupling of residential and business turf lawn replacement with the solar conversion aggregation block process (Measure #5), (3) converting select municipal facilities to low water use plantings and irrigation, and (4) updating various municipal landscape regulations and guidelines to comply with new state requirements and further promote outdoor water use efficiency.

Status

The Conservation and Environmental Services Department continues to implement its community-based NatureScape program which promotes nature-friendly landscaping by educating residents and businesses through free on-site assessments of their properties to evaluate wildlife-friendly and water-conserving features. City staff also educates participants about possible water-saving improvements and available incentives and rebates, when applicable. Properties which successfully meet the program's requirements are certified through the National Wildlife Federation's "Backyard Wildlife Habitat" program and receive an aluminum yard sign and certificate. To date, staff has performed on-site assessments for property owners and established approximately 275 NatureScape yards through the program's current limited funding source.

On Dec 8 2009, the City Council approved a new Chula Vista Landscape Water Conservation ordinance, Chapter 20.12 of the Municipal Code. The ordinance, which was drafted by the Development Services Department in collaboration with Otay Water District and Sweetwater Authority, outlines new water-conserving landscape design criteria which will typically apply to new and renovated landscaped areas over 2,500 ft^2 throughout the City. The ordinance also promotes the use of recycled and gray water for irrigation purposes and the reduction of excessive turf areas. For properties under the 2,500 ft^2 threshold, Conservation and Environmental Services Department has developed an "Outdoor WaterSmart Checklist" which promote a wide range of water-saving design and operational features which can be incorporated into all landscaping. The checklist is complemented by free, on-line WaterSmart landscaping plans. Since becoming effective on January 1, 2010, 17 development projects have submitted or are in the process of submitting full landscape design packages which meet the new code requirements. In addition, over 50 permit applicants, who are installing or replacing smaller landscaped areas, have received an "Outdoor WaterSmart Checklist" for reference.

Finally, the Public Works Department was successful in receiving a $6,500 grant through Otay Water District's "Cash for WaterSmart Plants Program." The funds were used to design and install low water use landscaping on the East H Street median (between Otay Lakes Road and Rutgers Avenue) to replace over 9,000 square feet of existing turf. The new landscaping will contribute to reducing municipal monthly utility costs and will serve as an example for community members. In addition, Public Works has applied for state funding to construct a comprehensive WaterSmart demonstration garden at the entrance to the City's Rice Canyon Preserve. If funded, the new garden would serve as an educational showcase for community members and local educational institutions.

Next Steps

City staff will continue, as funding permits, to enroll property owners in the Chula Vista NatureScape program and certify their yards and gardens through the National Wildlife Federation. Additionally, outdoor water use efficiency and turf conversions may be

incorporated into the eventual expansion of the *Home Upgrade, Carbon Downgrade* program.

IMPLEMENTATION FINANCING

Because staff has already secured almost $670,000 in one-time funds for initial implementation, the new measures' full implementation costs (revised amount) are now estimated at $2,120,000 and $1,990,000 in one-time and annual costs, respectively (Table 1). In the Council-approved implementation plans, staff outlined various financing options to support full implementation of the new climate protection measures. Over the past 2 years, staff has pursued these options as highlighted below:

Table 1: Revised implementation cost estimates for the Council-approved climate measures

CCWG MEASURE #	POLICY/PROGRAM	PROGRAM STRATEGY	ONE-TIME COSTS		ANNUAL COSTS
			Received^	Needed	
Admin.	Emissions Tracking & Reporting	Track progress in reducing carbon emissions through ICLEI and California Climate Action Registry program participation	--------	--------	$95,000
1	100% Clean Vehicle Replacement Policy for City Fleet	Replace vehicles through the purchase or lease of alternative fuel and hybrid vehicles	$200,000	$0	$160,000
2	100% Clean Vehicle Replacement Policy for City-Contracted Fleet Services	Work with current and future vendors to include a "Clean Vehicle" replacement policy into the bid and contracting process	--------	--------	--------
3	Business Energy Assessments	Through an ordinance addition, encourage businesses to participate in a no cost assessment as part of the business licensing process	--------	--------	$325,000
4	Green Building Standard	Through a building code revision, require new and renovated buildings to increase their energy efficiency and meet statewide green building standards	$235,000	$0	$650,000
5	Solar & Energy Efficiency Conversion*	Provide a cost-effectve, streamlined mechanism for property owners to implement solar and energy efficiency upgrades and create a municipal code requiring pre-wiring for solar electric systems	$75,000	$0	$350,000
6	Smart Growth Around Trolley Stations**	Implement the 'smart growth' design principles outlined in municipal planning documents	$0	$620,000	--------
7	Outdoor Water Conservation***	Provide a cost effective, streamlined mechanism for installing water saving plants at private/public sites and create new municipal landscape regulations	$160,000	$1,500,000	$410,000
		TOTAL	**$670,000**	**$2,120,000**	**$1,990,000**

* In addition to annual costs presented, implementation of measure #5 would require issuance of a public bond, paid back by the property-owners receiving the services, to cover upfront capital costs for solar and energy efficiency upgrades

** The City has already secured approximately $2 million for related regional smart growth efforts such as the I-5 Corridor Study

*** One-time costs for measure #7 include $1,500,000 for Municipal Facilities Turf Conversion CIP

^ The City has funded some one-time costs through grants/other external sources and by redirecting existing staff time to implement measures.

SDG&E Local Government Partnership
Since 2006 Chula Vista and San Diego Gas & Electric (SDG&E) have been jointly implementing programs to reduce energy consumption at municipal facilities and in the community through their Local Government Partnership. The funding is provided through a California Public Utilities Commission-sponsored "Public Goods Charge", which is a monthly utility bill surcharge on energy consumed by every customer in SDG&E's territory.

The City has received over $4 million (3-year total) through San Diego Gas & Electric's Local Government Partnership program which provides support for staff time (salaries and benefits for 6 full-time and 7 part-time staff members) and program costs for Measures #3 (Business Evaluations), #4 (Green Building Standard), and #5. The current Local Government Partnership funding expires at the end of December 2012 and staff will pursue continuation (and expansion) of the funding source.

Energy Franchise Fees
Currently, the City collects a franchise fee of 1.25% and 2.00% on citywide electricity and natural gas sales, respectively, through San Diego Gas & Electric regardless of energy provider. Staff has been negotiating with San Diego Gas & Electric to increase the franchise fee to fund carbon-saving improvement projects in the community and at municipal facilities. For example, an increase of 1% in both electricity (adjusted rate = 2.25%) and natural gas (adjusted rate = 3.00%) fees would generate approximately $2.2 million in additional revenue and meet 100% of the ongoing funding needs for all climate protection measures implementation. Any new rate would still be under or comparable to other local jurisdiction's energy franchise fees. At this point, SDG&E has been reluctant to support a franchise fee increase for climate protection purposes and continues to discuss alternate funding options with City staff.

Local Fee Authority
A local fee authority has been granted in the past by the State legislature to enable local governments to fund environmental programs and services. For example, Chula Vista received fee authority under Assembly Bill 939 (Integrated Waste Management Act of 1989) to fund the development and implementation of municipal solid waste, recycling and household hazardous waste programs to meet state-mandated landfill diversion goals and local reporting requirements. A new carbon-focused Local Fee Authority would enable jurisdictions to place a local surcharge on utility bills (such as energy, water, or sewer) to fund local carbon reduction programs and services. Over the last 2 years, staff has helped to draft potential bill language for review and consideration by local and statewide elected officials. Staff has also shared the draft language with other California cities and counties to broaden support and to encourage legislative action. Similar to franchise fees, the Local Fee Authority would create a new, long-term revenue source for the implementation of <u>all</u> seven climate protection measures.

Building Permit Fees
Development fees could be increased to cover the additional costs associated with implementing a citywide, mandatory green building standard (Measure #4). The extra costs are attributed to the need for enhanced staff training on energy efficiency, renewable energy and sustainable building technologies, and for expanded permitting and inspection services. The Finance Department is currently finalizing a Master Fee Study assessing the revenue

needed to fully fund the City's broader development-related services. As part of this study, the City will be able to specifically assess the additional costs from a mandatory green building program and revise the fee schedule as needed. Staff anticipates presenting the Master Fee Study's results to City Council in spring 2011 for review and consideration.

Bonds

The Council-approved financial strategy outlined the use of municipal bonds to support measures implementation. A municipal bond would be utilized to finance two carbon-saving project types - public purpose projects (such as municipal renewable energy installations) and community retrofit projects (such as energy and water efficiency upgrades in homes and businesses). Regardless of project type, the municipal bond's debt service would be offset by the resulting energy cost savings and repaid by beneficiaries of those savings.

Since the last progress report, staff has hired financial advisors to further prepare issuance packages for the City's Clean Renewable Energy Bonds (CREBs) and Qualified Energy Conservation Bonds (QECBs) allocations. These special Internal Revenue Service tax credit bond programs are structured to allow public agencies to fund energy-saving projects and use the resulting cost savings to fully repay the bond debt. The CREBs and QECBs will be able finance the installation of up to 1.1 MW of additional solar photovoltaic systems and the retrofitting of an additional 4,400 streetlights with more efficient technologies, respectively. Staff anticipates presenting the proposed QECB financing package to City Council by January 2011 for formal review and consideration, while the CREBs package will be presented in April 2011.

As described under Measure #5, staff is investigating municipal bond options to support an expanded community energy retrofit loan program. This is necessary because of recent federal policies which limit the use of Property Assessed Clean Energy (PACE) financing such as the statewide CaliforniaFIRST Program which Chula Vista joined at the beginning of 2010. Any new bonds for community retrofits would be secured through a lien on participants' properties and repaid through the resulting utility cost savings. As such, staff plans to return to City Council in early 2011 for consideration of a municipal bond package to support an expanded community energy retrofit loan program.

Grants

Through the federal Energy Efficiency & Conservation Block Grant (EECBG) program, the City has received $1,974,300 to reduce energy consumption and stimulate the local economy. The funding has allowed the City to move forward with a number of projects that advance the City's *Climate Action Plan* by installing a new biodiesel fuel tank at the Public Works Corp Yard and converting 128 diesel-fueled fleet vehicles to the alternative fuel source (Measure #1-City Fleet Clean Vehicle Replacements), expanding on-site municipal solar energy systems (Measure #5-Energy Efficiency & Renewable Energy Conversions), and by providing direct incentives and loans to homeowners interested in energy efficiency projects (Measure #5). The City will also be resubmitting a grant application to CalFIRE to expand the NatureScape program (Measure #7-Turf Removal & Landscape Water Efficiency).

City staff will continue to implement the Council-approved climate protection measures and to further the City's progress in creating tangible carbon reductions. One of the greatest challenges to facilitating further municipal and community-wide carbon reductions will be to establish a secure long-term funding source to ensure that the progress and momentum regained over the past two years continues until the City's environmental and economic sustainability goals are achieved.